

Discussion on CERCLA Process for New Areas of Concern Brookhaven National Laboratory

January 27, 2021

Briefing for IAG

BROOKHAVEN
NATIONAL LABORATORY



BNL's Response to PFAS and 1,4-Dioxane

2017

- Sampled select on-site and off-site monitoring wells and treatment systems for 1,4-dioxane

2018

- Records search to identify areas where firefighting foam was used
- Phase 1: Characterize PFAS in source water contributing areas for BNL water supply wells
 - Installed 7 temporary profile wells
- Phase 2: Characterize PFAS downgradient of eight foam release areas
 - Installed 30 temporary profile wells

2018-2019

- Phase 3: Sampled on-site treatment systems and site boundary areas
 - Installed 11 temporary profile wells for PFAS and 1,4-dioxane
 - Sampled 33 permanent monitoring wells for PFAS and 1,4-dioxane
 - Sampled 8 on-site treatment systems for PFAS

2019-2020

- Private Well Survey
 - In coordination with SCDHS, sampled 76 private wells for PFAS and 1,4-dioxane
 - 1,4-Dioxane not detected > 1 µg/L
 - Several wells with PFOS or PFOA >10 ng/L. Possible off-site sources are being evaluated.

BNL's Response to PFAS and 1,4-Dioxane (cont.)

2020

- Phase 4: Comprehensive sampling in on-site and off-site areas
 - 360 on-site and off-site monitoring wells for PFAS and 1,4-dioxane
 - 2 on-site systems for 1,4-dioxane
 - 5 off-site treatment systems for PFAS and 1,4-dioxane
 - Sewage Treatment Plant influent and effluent
- Phase 5: Detailed characterization of the Current and Former Firehouse PFAS plumes
 - Installed 73 temporary profile wells
 - Data being used to design groundwater treatment systems of the Current and Former Firehouse PFAS plumes
- Start work to return to service granular activated carbon filters at three water supply wells

Proposed Path Forward

- Submit a recommendation to EPA and NYSDEC that identifies the following:
 - AOC 33 – PFOS and PFOA with 9 sub-areas (33a through 33i)
 - AOC 34 – 1,4-Dioxane
- Operable Unit (OU VIII) that covers PFOS, PFOA and 1,4-dioxane remedial investigation and remedial actions
- The new AOCs and OU will be included in the next annual update to the IAG Schedules Document (November 2021). The Schedules Document will also be the mechanism to update the RI/FS milestones

Accelerated Action

- Submit a schedule for incorporating the existing project addressing the Current and Former Firehouse PFAS source area groundwater characterization and remediation into the CERCLA program as a Time Critical Removal Action (TCRA), including:
 - Characterization Work Plan - submitted to the regulators March 4, 2020 and field work was initiated mid-July. The goal is to obtain the data needed to support the design of groundwater treatment systems that will be required to remediate the highest levels of PFAS contamination downgradient of the firehouses.
 - Provided an update on available groundwater characterization results during January 7th IAG teleconference
 - Submit a Phase 5 characterization summary of the PFAS Source Area effort in mid-February 2021

Accelerated Action (cont'd)

- Submit a Design Report for PFAS Source Area Groundwater Treatment Systems to regulators in mid-March 2021.
- Submit a draft CERCLA-required Action Memo in April 2021. This will include a summary of the characterization, groundwater modeling, and the planned groundwater source control remedy.
 - The Action Memo is the decision document for this TCRA and is ultimately incorporated as a final remedy in the future OU 8 ROD.
- Construct accelerated groundwater remedy for the Current and Former Firehouse plumes in 2021/2022.
- Submit a Start-up Report to document system construction completion and the results of the start-up testing in mid-2022.

Additional CERCLA Actions

- Agree on conceptual approach for RI/FS process (SOW, Work Plan, RI/FS); however, schedule will be contingent upon funding commitment
- The RI work will include characterizing:
 - PFOS and PFOA in on-site and off-site areas where data gaps exist
 - Distribution of PFAS in source area soils
 - 1,4-Dioxane in on-site and off-site areas where data gaps exist

Discussion Topics

- How are other CERCLA sites in NY addressing this issue administratively?
- Is either EPA or NYSDEC guidance forthcoming to help address implementation issues for these contaminants such as:
 - Groundwater vs. drinking water standards
 - Standardization of sampling/analytical methodology for groundwater and soil
 - Soil cleanup goals (ex. NYS recent guidance), limited soil cleanup technology and understanding at present time
 - Discharge limits (PFAS, 1,4-dioxane) for existing and new groundwater treatment systems (point of compliance)
 - PFAS and 1,4-dioxane concentration levels that will require active remediation vs. monitored natural attenuation.

Next Steps

- BSA/DOE sends formal letter on OU/AOC approach and TCRA
- Funding for preparation of the Work Plan and subsequent RI/FS activities needs to be identified prior to submitting a target date for the SOW and submittal of the RI/FS Work Plan.